

Qualification Description:

The information contained herein represents proof of Reliability and Performance of the Package Series listed below in accordance with the Qualification Plan and test methods referenced in Section 7.0, after exposure to a variety of environments and mechanical events that occur during installation and operational lifetime of the product. Upon conclusion of the testing the product continued to operate within specification limits, demonstrating its capability of reliable operation throughout its lifetime.

The purpose of this report is to present Qualification Test results of the referenced Package Series. The Pericom product data presented in this report qualifies the products manufactured in this package configuration, using the same bill of materials and assembled by the identified subcontractor location. The report describes the qualification test program, procedures utilized, criteria enforced (at the time of product validation), and specific result data obtained during the testing of three lots of semiconductors. The three lots consist of an equal number of units from different date codes, from the same production line and SubContractor to ensure manufacturing repeatability.

Lot Background Information:

Qual Part Number:	PI3A223ZME
Supplier (Code):	GA (Q)
Pkg Type - Code:	UQFN1.4x.18-10L (ZM10)
Outline Drawing:	PD-0044
By Extension Pkg:	UDFN1x1-6L (ZU6)

Qual Test Date:	Aug-2010, Updated Aug-2014
Die Attach Material:	8006NS
Wire Size & Material:	0.8 mil Gold
Mold Compound:	G770HCD
Leadframe Material:	Copper (EFTEC64T)
Lead Finish:	PPF (NiPdAu)
Date Codes:	Z1021QG

Pericom's Qualification Test Results:

Stress Test	Test Procedure	Test Conditions	Duration	# of Lots	Samples per Lot	Results Pass/Fail
Preconditioning	JESD22-A113	MSL1	NA	3	176	528 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	3	22	66 / 0
PreCon Autoclave	JESD22-A102	121°C, RH 100%, 29.7 psia	96 hrs	3	77	231 / 0
PreCon BHAST PI5A3157BZUE	JESD22-A110	130°C, RH 85%, 33.3 psia, 5.5V	96 hrs	3	77	231 / 0
PreCon Temp Cycle	JESD22-A104	-55°C to +150°C	500 cycles	3	77	231 / 0
		-55°C to +150°C	1000 cycles	3	77	231 / 0
HTSL (no PreCon)	JESD22-A103	1000hrs, 0V, 150°C	500 hrs	3	77	231 / 0
		1000hrs, 0V, 150°C	1000 hrs	3	77	231 / 0
Physical Dimension	JESD22-B100	Per Datasheet	NA	3	5	15 / 0
External Visual Insp	JESD22-B101	NA	NA	3	5	15 / 0
Solderability	J-STD-020	Pb-Free Solder Dip 245°C	NA	3	5	15 / 0
	JESD22-B102					

Qualificaton by Extension Information:

Where a product of interest is not sampled during this period, it is valid to use the reliability data of the particular process technology or package type family to which the part belongs. All parts within the same family are designed to the same rules, and manufacturing is controlled by SPC. Within a product family, a device can only be fabricated on one process technology/ option, and only assembled on one package type process.

If there are any questions about this qualification, please contact Quality Support at:

customerquestion@pericom.com

Qualification Description:

The information contained herein represents proof of Reliability and Performance of the Package Series listed below in accordance with the Qualification Plan and test methods referenced in Section 7.0, after exposure to a variety of environments and mechanical events that occur during installation and operational lifetime of the product. Upon conclusion of the testing the product continued to operate within specification limits, demonstrating its capability of reliable operation throughout its lifetime.

The purpose of this report is to present Qualification Test results of the referenced Package Series. The Pericom product data presented in this report qualifies the products manufactured in this package configuration, using the same bill of materials and assembled by the identified subcontractor location. The report describes the qualification test program, procedures utilized, criteria enforced (at the time of product validation), and specific result data obtained during the testing of three lots of semiconductors. The three lots consist of an equal number of units from different date codes, from the same production line and SubContractor to ensure manufacturing repeatability.

Lot Background Information:

Qual Part Number:	PI4ULS3V304ZME
Supplier (Code):	JCET (J) formerly CJE
Pkg Type - Code:	UQFN1.7X2-12L (ZM12)
Outline Drawing:	PD-2173
By Extension Pkg:	UQFN1.4x.18-10L (ZM10), UQFN1.3x1.6-10L (ZL10) UQFN1.6x1.6-8L (XT08)

Qual Test Date:	Nov 2014
Die Attach Material:	8006NS
Wire Size & Material:	0.8 mil Au wire
Mold Compound:	G770HCD
Leadframe Material:	Copper
Lead Finish:	PPF (NiPdAu)
Date Codes:	1423JG

Pericom's Qualification Test Results:

Stress Test	Test Procedure	Test Conditions	Duration	# of Lots	Samples per Lot	Results Pass/Fail
Preconditioning	JESD22-A113	MSL1	NA	3	253	759 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	3	22	66 / 0
PreCon Autoclave	JESD22-A102	121°C, RH 100%, 29.7 psia	96 hrs	3	77	231 / 0
PreCon Temp Cycle	JESD22-A104	-55°C to +150°C	500 cycles	3	77	231 / 0
		-55°C to +150°C	1000 cycles	3	77	231 / 0
HTSL (no PreCon)	JESD22-A103	1000hrs, 0V, 150°C	500 hrs	3	77	231 / 0
		1000hrs, 0V, 150°C	1000 hrs	3	77	231 / 0
Physical Dimension	JESD22-B100	Per Datasheet	NA	3	5	15 / 0
External Visual Insp	JESD22-B101	NA	NA	3	5	15 / 0
Solderability	J-STD-020 JESD22-B102	Pb-Free Solder Dip 245°C	NA	3	5	15 / 0

Qualificaton by Extension Information:

Where a product of interest is not sampled during this period, it is valid to use the reliability data of the particular process technology or package type family to which the part belongs. All parts within the same family are designed to the same rules, and manufacturing is controlled by SPC. Within a product family, a device can only be fabricated on one process technology/ option, and only assembled on one package type process.

If there are any questions about this qualification, please contact Quality Support at:

customerquestion@pericom.com

Package Qualification Report

Reliability By Design

Qualification Description:

The information contained herein represents proof of Reliability and Performance of the Package Series listed below in accordance with the Qualification Plan and test methods referenced in Section 7.0, after exposure to a variety of environments and mechanical events that occur during installation and operational lifetime of the product. Upon conclusion of the testing the product continued to operate within specification limits, demonstrating its capability of reliable operation throughout its lifetime.

The purpose of this report is to present Qualification Test results of the referenced Package Series. The Pericom product data presented in this report qualifies the products manufactured in this package configuration, using the same bill of materials and assembled by the identified subcontractor location. The report describes the qualification test program, procedures utilized, criteria enforced (at the time of product validation), and specific result data obtained during the testing of three lots of semiconductors. The three lots consist of an equal number of units from different date codes, from the same production line and SubContractor to ensure manufacturing repeatability.

Lot Background Information:

Qual Part Number:	PI3A288ZME
Supplier (Code):	SAT (S)
Pkg Type - Code:	UQFN-10L (ZM10) 1.4x1.8mm
Outline Drawing:	PD-0044
By Extension Pkg:	none

Qual Test Date:	May-2016
Die Attach Material:	8006NS
Wire Size & Material:	0.8 mil Au
Mold Compound:	EME-G770HCD
Leadframe Material:	Copper
Lead Finish:	PPF
Date Codes:	1606SG, 1607SG, 1608SG

Pericom's Qualification Test Results:

Stress Test	Test Procedure	Test Conditions	Duration	# of Lots	Samples per Lot	Results Pass/Fail
Preconditioning	JESD22-A113	MSL1	NA	3	253	759 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, or Down bond areas	NA	3	22	66 / 0
PreCon UHAST	JESD22-A118	130C, 85% RH, 96Hrs, 33.3 psia (230kPa)	96 hrs	3	77	231 / 0
PreCon BHAST	JESD22-A110	130C, 85% RH, 33.3 psia (230kPa), Vmax	96 hrs	3	77	231 / 0
PreCon Temp Cycle	JESD22-A104	-65°C to +150°C	100 cycles	3	77	231 / 0
		-65°C to +150°C	500 cycles	3	77	231 / 0
HTSL (no PreCon)	JESD22-A103	1000hrs, 0V, 150°C	500 hrs	3	77	231 / 0
		1000hrs, 0V, 150°C	1000 hrs	3	77	231 / 0
Physical Dimension	JESD22-B100	Per Datasheet	NA	3	5	15 / 0
External Visual Insp	JESD22-B101	Workmanship, Marking, etc.	NA	3	5	15 / 0
Solderability	J-STD-020 JESD22-B102	Pb-Free Solder Dip 245°C	NA	3	5	15 / 0

Qualification by Extension Information:

Where a product of interest is not sampled during this period, it is valid to use the reliability data of the particular process technology or package type family to which the part belongs. All parts within the same family are designed to the same rules, and manufacturing is controlled by SPC. Within a product family, a device can only be fabricated on one process technology/ option, and only assembled on one package type process.

If there are any questions about this qualification, please contact Quality Support at:

customerquestion@diodes.com

Date: **May-2016**
Subject: **UQFN-10L (ZM10) 1.4x1.8mm** QBE: none
Qual Device: **PI3A288ZME**

By extension: Diodes/Pericom active devices using the Fab/Process at the time of the Qualification:

PI3USB102ZMEX				
PI3A268CZMEX				
PI3A223ZMEX				
PI3A288ZMEX				
PI3USB42ZMEX				
PI3USB10LP-BEZMEX				
PI3USB223ZMEX				
PI3A2268ZMEX				